



The woman who drew Little Boy

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Give her a pencil and paper, and Miriam White Campbell could draw anything — even the plans to a top-secret atomic bomb.

She worked at Los Alamos in the 1940s when it was a clandestine lab racing to create the world's first nuclear weapons to help end World War II. Campbell drew the designs for the internal workings of the gun-type uranium bomb, known as Little Boy, which was detonated over Hiroshima on Aug. 6, 1945.

Campbell was more than a talented artist. She was trained in architecture, experienced in technical drawing, and served in the military. And, perhaps most notably, she was an original staff member at Los Alamos and made valuable contributions to the Lab's original national security mission at a time when women were limited in both educational and professional opportunities.

From the Midwest to the mountains

Before WWII broke out, Campbell studied architecture at the University of Illinois and engineering at Purdue University. As an architecture student, Campbell worked under a physicist who was developing spatial equipment to process coal. She worked as a technical draftsman, which required her to graphically represent equipment structures, machines and other components. Craftsmen would use her drafting to visually reference technical designs as they built equipment.

In December 1942, she joined the Women's Army Corps (WAC) in the hopes of contributing to the U.S. war effort. By August 1943, Campbell was transferred from her initial assignment at Fort Des Moines Army Base in Iowa to a special, secret project. Decades later, she recounted her experience in an oral history interview: "We were told absolutely nothing and we didn't know where we were going. We knew nothing, but you accepted it. [In] wartime, you accept a lot of things."

Once in Los Alamos, Campbell was unsure why she was chosen for this assignment, but it quickly became clear that she possessed a valuable — and much needed — skill set.

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Bringing Little Boy to life on paper

At the Lab, Campbell was immediately assigned to work with physicist James Serduke and Capt. William “Deak” Parsons in the Lab’s Ordnance Division, where she began drawing classified schematics.

In the 1940s, it was still quite uncommon for a woman to pursue any education or career in the field of engineering. As the U.S. became increasingly involved in WWII, men were drafted into the military at the same time as production began increasing for armaments. This sudden shortage of engineers catapulted women into roles that otherwise would not have been available to them.

Initially, Campbell worked in a shared drafting office, but was abruptly moved into a private technical office. She was drawing what would be known as Little Boy.

“I not only drew it, I cut out drawings, isometric drawings, and cut it out so you could see everything in the bomb,” she later recalled.

The isometric cutout perspectives were unique because they displayed both the exterior and interior components of the bomb. The cutouts allowed the craftsmen to remove pieces and view different components of the bomb’s interior.

Little Boy was the uranium gun-type atomic weapon developed in Los Alamos. It was 9,700 lbs, 10 feet long, and just over two feet in diameter. Miriam White Campbell used her technical drawing and architectural knowledge, as well as her artistic talent, to contribute to the creation of the weapon.

Life in Los Alamos and after the war

In addition to her work, Campbell enjoyed life in Los Alamos. She was given permission for her dog, Mack, to be shipped from Illinois to New Mexico after arguing that her parents were unable to feed him and that the mess hall in Los Alamos was wasting enough food for her to keep him well-fed.

Mack was shipped in a crate by rail and delivered to P.O. Box 1663, the now-famous Santa Fe mailing address that was used for the entire town of Los Alamos during the war. Mack accompanied Campbell to work, napping in the hallway and forcing the officers and scientists to step over him.

By the time the atomic bombs were used in combat, Campbell and Mack were no longer living in Los Alamos. She remembers hearing of the bombings on Japan and recalls mixed feelings. She lamented the resulting loss of life, but felt relief that the world’s bloodiest war had finally ended.

In the following years, Campbell completed her degree in architecture and finished a master’s degree in city planning, a field in which she worked for 31 years.

Miriam White Campbell died in 2006 at the age of 88 in San Diego, California.

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